CLAIMS

What is claimed is:

1. A balloon catheter having a proximal end and a distal end for medically treating a patient, comprising:

a hypotube having a proximal tubular portion, an intermediate tubular portion having a longitudinal indentation, and a distal portion;

an inner tubular body having a proximal and distal end, and defining a proximal and distal guidwire port at each end respectively, and a guidewire lumen extending between the guidewire ports;

an outer tubular body surrounding at least a portion of the inner tubular body;

the proximal ends of the inner and outer tubular bodies being affixed together and sealed to the hypotube at a point defined at or near a transition between the intermediate and distal portions of the hypotube;

a balloon affixed to the inner and outer tubular bodies at or near their distal ends;

an inflation lumen extending from the hypotube proximal end, through the hypotube proximal and intermediate tubular portions, and through an annular space between the outer and inner tubular bodies, into an interior of the balloon;

the distal portion of the hypotube extending a distance into the outer tubular body;

providing a transition in flexibility between the tubular portions of the hypotube to the inner and outer bodies;

the balloon catheter thus having a rapid-exchange configuration.

2. The balloon catheter of Claim 1, wherein the balloon has a central inflatable portion between a proximal collar and a distal collar each affixed to the catheter shaft; the balloon in an initial configuration being deflated, pleated and wrapped around the catheter shaft.

3. The balloon catheter of Claim 1, wherein the hypotube is integral and unitary.

4. The balloon catheter of Claim 1, wherein the distal portion of the hypotube has an arcuate cross-section.

5. The balloon catheter of Claim 1, wherein the longitudinal indentation is shallower in a proximal direction, and deeper in a distal direction.

6. The balloon catheter of Claim 1, wherein the proximal portion of the hypotube is cylindrical.

7. The balloon catheter of Claim 6, further comprising a tapering portion between the proximal cylindrical portion and the indented intermediate portion.

8. The balloon catheter of Claim 1 further comprising a stent crimped around the balloon.

9. The balloon catheter of Claim 1, wherein the proximal ends of the inner and outer tubular bodies are sealed to the hypotube with a single seal.

10. The balloon catheter of Claim 1, wherein the hypotube is made of stainless steel.